

SEQUENCE LISTING

<110> KUMAGAI, Monto H.
ROBERTS, Peter D.
VAEWHONGS, Andy A.

<120> CYTOPLASMIC GENE INHIBITION OR GENE
EXPRESSION IN TRANSFECTED PLANTS BY TOBRAVIRAL VECTOR

<130> 008010137CPUS04

<140> 09/771,035

<141> 2001-01-21

<150> 09/359,301

<151> 1999-07-21

<150> PCT/ US 00/20261

<151> 2000-07-21

<160> 58

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 6791

<212> DNA

<213> Tobravirus

<400> 1

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Revised

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<211> 133

<212> DNA

<213> Pea Early Browning Virus

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<211> 133

<212> DNA

<213> Pea Early Browning Virus

<400> 3

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<213> Pea Early Browning Virus

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Met
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ccc caa att gga ctt gtt 138
Pro Gln Ile Gly Leu Val
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<210> 5
<211> 7
<212> PRT
<213> Pea Early Browning Virus

<400> 5
Met Pro Gln Ile Gly Leu Val
1 5

<210> 6
<211> 61
<212> DNA
<213> Nicotiana benthamiana

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<212> DNA
<213> Nicotiana benthamiana

<220>
<221> CDS
<222> (28)...(48)

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1 5

<210> 8
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<212> PRT
<213> Nicotiana benthamiana

<400> 8

Met Pro Gln Ile Gly Leu Val

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5

<210> 9

<211> 400

<212> DNA

<213> Arabidopsis thaliana

<400> 9

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<211> 400

<212> DNA

<213> Arabidopsis thaliana

<220>

<221> misc_feature

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<210> 11

<211> 550

<212> DNA

<213> Arabidopsis thaliana

<400> 11

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<210> 12

<211> 550

<212> DNA

<213> *Oryza sativa*

<400> 12

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<210> 13

<211> 389

<212> DNA

<213> *Arabidopsis thaliana*

<400> 13

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<210> 14

<211> 391

<212> DNA

<213> *Nicotiana benthamiana*

<400> 14

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<210> 15

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<212> DNA

<213> Pea Early Browning Virus

<220>

<221> CDS

<222> (120)...(140)

<400> 15

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<210> 17
 <211> 360
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<210> 18
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 <213> Nicotiana benthamiana

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 caagttgtta tttttgtcaa gagtgttaagt cgggcagcac agctggataa attactagtg 180
 gagtgttaatt ttccatctat ctgcatccac tctggcatga tcttgtcgca actgatctgg 240
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 ccatcacatt tgtgtcatct gcatcagatt ctgatgttct aaatcaggtt caagaaaggt 420
 ttgaagtaga cataaaagag cttcctgagc agattgatac ttctacgtac atgccatctt 480
 agcgatctcg agagcttcca gcaatatcaa gtcattttaa agatgggggg aactgacagg 540
 tgttttgcta ttgttggtta tttgaagaat tggggggctc ctactatatg ctcttgcaact 600
 gctgagctgc tgtacccttg ttgaactact ctttctctc cagtttaaga ggagcaccta 660
 agaaatg 667

<210> 19
 <211> 331
 <212> DNA
 <213> Nicotiana benthamiana

<400> 19
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 ggtgggtaca tcattggacc aagatcgagt ctttatcaag tgaataaata aagtgaatg 180
 caacgcattg tatgaatcca gtagtaatta tcataattcg gattcaccaa ttagtgtaaa 240
 ttctttctgt ggtgtttggt tttttcatat aaattttctt gctgttggtt tgatatgacg 300
 tttcaactca atccacgcaa atcatttcat t 331

<210> 20

<211> 649
 <212> DNA
 <213> Nicotiana benthamiana

<400> 20
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 cattgacatg gatgctgatg tgatcacaat tgagaactca cgggccgatg agaagctcct 180
 ctacagttttc agggaggagg ttaagtatgg tgctggaatt ggccccgggtg tctatgatat 240
 ccactcccct agaataccat caacggaaga gattgctgac agagttaaca agatgcttgc 300
 tgttcttgac accaacatct tgtgggtcaa cccagattgt ggtctcaaga ctgcgaagta 360
 cgctgaggta aagccagccc tcgagaacat ggtttctgct gcccaaggcca tccgcaccca 420
 acttgccagc accaagtggag tcagatgaag gagtcgagac atatcaagat tccctttttc 480
 atgaaacaga aaattctatg ttgattttta atcattgtgt tggcaacaaa tattgtttgtg 540
 taggttagct ctgcccgctg ggcattttct tcttgtgttt gagccatttc cttttcgga 600
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<210> 21
 <211> 727
 <212> DNA
 <213> Nicotiana benthamiana

<400> 21
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 tctttcacag caaaggaaaa gacgacagat accggcaaca ctggcctctg tggatgctct 180
 ggaaagatat acccaactga atagttatcc tcttcacaaa accaacaacac ctggtatttt 240
 gtctttggat attcattatc ctaaggactt aattgctact ggtggtgttg attcaaatgc 300
 tgttggtcttt gatcgtcctt caggacaaat catatcaaca ctaactggtc atttaaagag 360
 ggttaccagt gtaaaatttg cgtctgaggg tgaactagtg gtctctggct cagcagataa 420
 gacagttcgt ttgtggcaaa gttctgaaaa tgggaactat gactgtaggc atgtcttgaa 480
 agatcataca gcagagggtgc aagctgtcac tgtccatgca accaataact attttgtgac 540
 tgcttctctt gatagcacat ggtgctttta tgatcttgct tctggcttat gccttgacaa 600
 ggtggcagat gctacagaat ctgagggtta cacatccgca agctttccca ccctgattgg 660
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 gtccagg 727

<210> 22
 <211> 720
 <212> DNA
 <213> Nicotiana benthamiana

<220>
 <221> misc_feature
 <222> (57)...(57)
 <223> n = A, T, C OR G

<400> 22
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 agttttctcaa gaggaggga tctgtattaaa cacaatacag tcaaaggctt tgataggaat 180
 aggttcgata ggggagggtac ctgtggtatt ggcaaaagcct caagcctaca tgaatttcag 240
 tggagaatcg gtcggaccac ttgctgcata ttatcagggt cctctgcgct acatccttct 300
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 ccgattttgc ataggcatag gaaatccacc tggaaactat gacatgaagg catatcttct 480
 acagaaattc agtgatacag agcgggaagca ggtggatgca gcacttaatc aaggagttga 540

tgctgtcagg acggtagtat tggaaggctt tggtagtaaa atttcacgat ttaatatagg	600
acagaaatac aagtatcaca aagtttgatg aaattgaatc taaaatgaag gtgtaaaaga	660
gcacgaagat ttactgataa cttcaagtct aaaaattaag ggtgtaaaaa gacccaagg	720

<210> 23
 <211> 61
 <212> DNA
 <213> Nicotiana benthamiana.

<400> 23	
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c	61

<210> 24
 <211> 57
 <212> DNA
 <213> Nicotiana benthamiana

<400> 24	
atgaagagca tgctaatacg actcactata gataaaacat ttcaatcctt tgaacgc	57

<210> 25
 <211> 39
 <212> DNA
 <213> Nicotiana benthamiana

<400> 25	
ttcatctgga tcccggggt aataacgctt acgtaggcg	39

<210> 26
 <211> 24
 <212> DNA
 <213> Pea Early Browning Virus

<400> 26	
gtcctaatacc ctagggattt aagg	24

<210> 27
 <211> 19
 <212> DNA
 <213> Pea Early Browning Virus

<400> 27	
cttttgaaat tgcagaaac	19

<210> 28
 <211> 19
 <212> DNA
 <213> Pea Early Browning Virus

<400> 28	
gtttctgcaa tttccaaag	19

<210> 29
 <211> 44
 <212> DNA
 <213> Pea Early Browning Virus

<400> 29
 gaattcggggg taccgcggcc gcgatatacct gcagggcgtt aact 44

 <210> 30
 <211> 45
 <212> DNA
 <213> Pea Early Browning Virus

 <400> 30
 gaattcggta ccctgcagga tatcgcggcc gcggcggtta ctcgg 45

 <210> 31
 <211> 27
 <212> DNA
 <213> Pea Early Browning Virus

 <400> 31
 aaggaaaaaa gcggccgcgg taccccg 27

 <210> 32
 <211> 42
 <212> DNA
 <213> Pea Early Browning Virus

 <400> 32
 cggatccccc gggtttaaac gggcgtaata acgcttacgt ag 42

 <210> 33
 <211> 35
 <212> DNA
 <213> Pea Early Browning Virus

 <400> 33
 aaactgcagc tcgagctgat ttaacaaatt ttaac 35

 <210> 34
 <211> 42
 <212> DNA
 <213> Pea Early Browning Virus

 <400> 34
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 <210> 35
 <211> 27
 <212> DNA
 <213> Pea Early Browning Virus

 <400> 35
 aaggaaaaaa gcggccgcgg taccccg 27

 <210> 36
 <211> 83
 <212> DNA
 <213> Pea Early Browning Virus

<400> 36
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 acgggcgtaa taacgttacg tag 83

<210> 37
 <211> 36
 <212> DNA
 <213> Nicotiana benthamiana

<400> 37
 tggttctgca gttatgcatg ccccaaattg gacttg 36

<210> 38
 <211> 37
 <212> DNA
 <213> Nicotiana benthamiana

<400> 38
 ttttcctttt gcggccgcta aactacgctt gcttctg 37

<210> 39
 <211> 37
 <212> DNA
 <213> Nicotiana benthamiana

<400> 39
 cgataacctg caggatgccc caaattggac ttgtttc 37

<210> 40
 <211> 38
 <212> DNA
 <213> Nicotiana benthamiana

<400> 40
 tgtgtaatgg cggccgcaat atgtgcaacc cagtctcg 38

<210> 41
 <211> 38
 <212> DNA
 <213> Nicotiana benthamiana

<400> 41
 cgataacctg caggacagaa aactgaagaa cacatctg 38

<210> 42
 <211> 38
 <212> DNA
 <213> Nicotiana benthamiana

<400> 42
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<210> 43
 <211> 24
 <212> DNA
 <213> Nicotiana benthamiana

<400> 43
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 <210> 44
 <211> 47
 <212> DNA
 <213> Nicotiana benthamiana

 <400> 44
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 <210> 45
 <211> 62
 <212> DNA
 <213> Nicotiana benthamiana

 <400> 45
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 tg 62

 <210> 46
 <211> 22
 <212> DNA
 <213> Nicotiana benthamiana

 <400> 46
 cggataacaa tttcacacag ga 22

 <210> 47
 <211> 24
 <212> DNA
 <213> Nicotiana benthamiana

 <400> 47
 aagttcttgc ttaagacg⁵tc atcg 24

 <210> 48
 <211> 22
 <212> DNA
 <213> Nicotiana benthamiana

 <400> 48
 cggataacaa tttcacacag ga 22

 <210> 49
 <211> 36
 <212> DNA
 <213> Nicotiana benthamiana

 <400> 49
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 <210> 50
 <211> 37
 <212> DNA
 <213> Nicotiana benthamiana

<400> 50

ttttcctttt gcggccgcta aactacgctt gcttctg

37

<210> 51

<211> 14

<212> DNA

<213> Nicotiana benthamiana

<400> 51

tcgagcggcc gcat

14

<210> 52

<211> 773

<212> DNA

<213> Arabidopsis thaliana

<400> 52

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acaatcttgt	acaagctcaa	gctcggagag	attgtcacca	ccatccctac	tattggtttc	180
aatgtgga	ctgtggaata	caagaacatt	agtttcacog	tgtgggatgt	cgggggtcag	240
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<210> 53

<211> 8

<212> PRT

<213> Arabidopsis thaliana

<400> 53

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<210> 54

<211> 5

<212> PRT

<213> Arabidopsis thaliana

<400> 54

Asp Val Gly Gly Gln

1

5

<210> 55

<211> 26

<212> DNA

<213> Nicotiana benthamiana

<400> 55

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26

<210> 56
<211> 26
<212> DNA
<213> *Nicotiana benthamiana*

<400> 56
atgttggttg agagccagtc cagacc 26

<210> 57
<211> 38
<212> DNA
<213> *N. tabacum*

<400> 57
tggttctgca gttatgcatg gcacagatta gcagcatg 38

<210> 58
<211> 41
<212> DNA
<213> *N. tabacum*

<400> 58
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